

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application. Please cancel claims 20, 21, 28 and 29. Please amend claims 18 and 26 as shown.

Claims 1-17 (canceled).

18 (currently amended): A non-aqueous electrolyte comprising (i) ~~(1)~~ a non-aqueous solvent, (ii) an electrolyte salt comprising LiBF₄ dissolved therein and (iii) 0.01 to 20% by weight, based upon a total weight of the electrolyte, of divinyl sulfone.

19 (previously presented): The non-aqueous electrolyte as claimed in claim 18, wherein said non-aqueous solvent comprises 5 - 50% by volume of a cyclic carbonate, 5 - 75% by volume of a cyclic ester and 0 - 70% by volume of a linear carbonate.

Claims 20-21 (cancelled).

22 (previously presented): The non-aqueous electrolyte as claimed in claim 18, wherein the content of the divinyl sulfone is 0.1 to 10% by weight, based upon a total weight of the electrolyte.

23 (previously presented): The non-aqueous electrolyte as claimed in claim 19, wherein the cyclic carbonate comprises at least one member selected from the group consisting of ethylene carbonate (EC), propylene carbonate (PC) and butylene carbonate (BC).

24 (previously presented): The non-aqueous electrolyte as claimed in claim 19, wherein the cyclic ester comprises at least one member selected from the group consisting of γ -butyrolactone and γ -valerolactone.

25 (previously presented): The non-aqueous electrolyte as claimed in claim 19, wherein the linear carbonate comprises at least one member selected from the group consisting of dimethyl carbonate (DMC), methylethyl carbonate (MEC), diethyl carbonate (DEC), methylpropyl carbonate (MPC), butylmethyl carbonate (BMC), methylisopropyl carbonate

(MIPC), isobutylmethyl carbonate (IBMC), sec-butylmethyl carbonate (SBMC) and tert-butylmethyl carbonate (TBMC).

26 (currently amended): A lithium secondary battery comprising (a) a cathode, (b) an anode and (c) a non-aqueous electrolyte comprising (i) a non-aqueous solvent, (ii) an electrolyte salt comprising LiBF_4 dissolved therein and (iii) 0.01 to 20% by weight, based upon a total weight of the electrolyte, of divinyl sulfone.

27 (previously presented): The lithium secondary battery as claimed in claim 26, wherein said non-aqueous solvent comprises 5 - 50% by volume of a cyclic carbonate, 5 - 75% by volume of a cyclic ester and 0 - 70% by volume of a linear carbonate.

Claim 28-29 (cancelled).

30 (previously presented): The lithium secondary battery as claimed in claim 26, wherein the content of the divinyl sulfone is 0.1 to 10% by weight, based upon the total weight of the electrolyte.

31 (previously presented): The lithium secondary battery as claimed in claim 27, wherein the cyclic carbonate comprises at least one member selected from the group consisting of ethylene carbonate (EC), propylene carbonate (PC) and butylene carbonate (BC).

32 (previously presented): The lithium secondary battery as claimed in claim 27, wherein the cyclic ester comprises at least one member selected from the group consisting of γ -butyrolactone and γ -valerolactone.

33 (previously presented): The lithium secondary battery as claimed in claim 27, wherein the linear carbonate comprises at least one member selected from the group consisting of dimethyl carbonate (DMC), methylethyl carbonate (MEC), diethyl carbonate (DEC), methylpropyl carbonate (MPC), butylmethyl carbonate (BMC), methylisopropyl carbonate (MIPC), isobutylmethyl carbonate (IBMC), sec-butylmethyl carbonate (SBMC) and tert-butylmethyl carbonate (TBMC).

34 (previously presented): The lithium secondary battery as claimed in claim 26, wherein said anode comprises a carbonaceous material having a graphite-type crystal structure having a lattice spacing (d_{002}) of the lattice face (002) of about 0.335 to 0.340 nanometers.